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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,006	04/17/2001	Hiroshi Kirita		7696

26021 7590 07/15/2004

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EXAMINER

LEE, CHEUKFAN

ART UNIT	PAPER NUMBER
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2622

DATE MAILED: 07/15/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,006

Applicant(s)

KIRITA, HIROSHI

Examiner

Cheukfan Lee

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 April 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) 6-10 and 16-20 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5 and 11-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Applicant's election without traverse of Group I invention, claims 1-5 and 11-15, in the reply filed on April 19, 2004 is acknowledged.

Applicant is reminded that claims 6-10 and 16-20 drawn to an invention nonelected without traverse in the reply filed on April 19, 2004 are not automatically canceled upon the filing of the reply. A complete reply to a final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 5, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Yokoi et al. (U.S. Patent No. 4,742,287).

Regarding claims 1 and 5, Applicant's admitted prior art machine or apparatus (fax machine or copying machine) is discussed on page 1, section 0003 to page 2, section 0005. The apparatus is equipped with a flat bed scanner (FBS) for scanning a stationary image on an original document placed on a platen by moving the scanning carriage and an automatic document feeder (ADF) for feeding plural sheets or original document set in a document hopper sheet by sheet and scanning images on the

original document. The ADF has a document feed motor (stepper or stepping motor) for moving document sheets loaded into the document hopper, and the FBS as a drive motor (stepper or stepping motor) for moving a carriage from a scanning start position to an end position. Each of the motors has its own motor driver. That is, there are two motor drives for the respective motors.

The admitted prior art machine differs from the claimed invention in that the two motors require two motor drivers instead of one driver for both the motors.

However, employing a single motor drive for selectively driving the two stepping motors and a control unit for selecting one of the two motors such that the motor driving unit drives the selected motor is taught by Yokoi et al. (Figs. 1 and 4, col. 3, line 11 – col. 4, line 8, col. 5, line 17 – col. 7, line 30). The stepping motor STM 2 for the ADF mechanism (13) is first driven for a given period of time, and during this period, the ADF is operated, and after the completion of the operation of the mechanism (13), the other stepping motor STM 1 is driven for a given period of time, and during this period, the form feeding mechanism (40) is operated. Both mechanisms (13 and 40) are constituted to operate with different operation timings which are not mutually superimposed (col. 5, lines 49-58). The use of a single motor driver instead of two drivers is to reduce the size and cost of the apparatus (col. 1, lines 47-45 and col. 2, lines 52-57).

Though, the (second) stepping motor STM 1 is not for moving the scanning member from a home position to a document scanning position as claimed, Yokoi et al. teaches selectively driving two stepping motors, which operate at mutually different

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timings, using a single motor drive. Further, Yokoi et al. states that the motor driving device of the invention is applicable to other mechanisms of the apparatus, as long as these mechanisms operate with different operating timings (col. 8, lines 48-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a single motor drive for selectively driving the two stepping motors of Applicant's prior art apparatus to reduce the size and cost of the apparatus as taught by Yokoi et al.

Regarding claims 11 and 15 are rejected for the reasons given for claims 1 and 5, respectively, since Applicant's prior art apparatus is a facsimile apparatus or a copying machine, which as an image recording device as claimed.

4. Claims 2, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Yokoi et al. (U.S. Patent No. 4,742,287) as applied to claims 1 and 11, and further in view of Zelle et al. (U.S. Patent No. 5,237,250).

Regarding claim 2, the apparatus of Applicant's prior art in view of Yokoi et al. is discussed for claim 1 above.

With regard to the claimed relay that the control unit switches to select the one of the motors, the transistors (including TR1 and TR2) of Yokoi et al. are equivalent to the relay and are considered to be better than the relay. However, employing relays, which are less expensive than transistors, for selecting and switching operations is not a novel idea and is taught by Zelle et al. In Zelle et al., relays are used in such a way that a

plurality of stepper motors are connected in parallel to a single driver such that a single drive sequentially drives multiple stepper motors thereby reducing the number of drives required for multiple stepper motors (col. 4, line 26 – col. 5, line 63).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a relay(s) instead of the transistors of Yokoi et al. (in the apparatus of Applicant's prior art in view of Yokoi et al.) for the selection and switching operation in the apparatus of Applicant's prior art in view of Yokoi et al., as taught by Zelle et al., to reduce the cost of the apparatus since relays are less expensive than transistors.

Claim 12 is rejected for the reason given for claim 2 for claiming the same limitations.

5. Claims 3, 4, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Yokoi et al. (U.S. Patent No. 4,742,287) and Zelle et al. (U.S. Patent No. 5,237,250) as applied to claims 2 and 12 above, and further in view of Kulterman et al. (U.S. Patent No. 4,401,931).

Regarding claims 3 and 4, the obvious apparatus of Applicant's prior art, Yokoi et al. and Zelle et al. is discussed for claim 2 above. Yokoi et al. does not disclose driving the two stepping motors STM2 and STM1 with different currents. Such feature is not novel and is taught by Kulterman et al. Two stepping motors (document indexing motor 20 and character selection motor 21) are selectively operated, or operated during mutually exclusive periods (Figs. 1-3, col. 3, line 3 – col. 6, line 9). A single motor driver

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(13) is employed to control the two motors (20 and 21). These motors are controlled and supplied with different currents (col. 4, line 45 +, col. 3, lines 9-33, col. 2, lines 16-30, and col. 1, lines 40-50). Current value data is sent to in accordance with selected motor. The motor control system of Kulterman et al. is also for reducing cost of the system (col. 1, lines 28-35).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the idea of Kulterman to control the motors of Applicant's prior art, Yokoi et al. and Zelle et al. by sending current value data to the motor driving unit in accordance with the selected motor to enable use of stepping motors which operate in different modes or have different energizing current characteristics, as taught by Kulterman et al. (col. 1, lines 46-50), since the two stepping motors of Applicant's admitted prior art apparatus are for feeding the document (ADF mode) and moving the scanning carriage (stationary document mode), respectively.

Claims 13 and 14 are rejected for the reasons given for claims 3 and 4, respectively, for claiming the same limitations.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

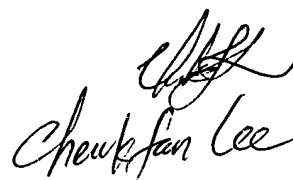
(U.S. Patent No. 5,825,512) discloses an image reading apparatus having two motors (33 and 30) for feeding a document sheet and moving a scanning carriage, respectively.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (703) 305-4867. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Cheukfan Lee
July 2, 2004

A handwritten signature in black ink, appearing to read "Cheukfan Lee", with a stylized flourish above the name.